

SEQUENCE LISTING

<110> Kumar, Chandrika

<120> Cloning and characterization of 5'
Flanking Regions of a Human Aggrecanase-1 Gene

<130> 4-33474

<150> 60/517,829

<151> 2003-11-06

<160> 37

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 2403

<212> DNA

<213> Homo sapiens

<400> 1

```

ctgcatttat ttgccttgat ccagcctggg agaagtcagg atagactttg ggctgcttgg 60
ccctggaggc agcttgagct gggactgggg tgggggggctc ctgaggggct gcctaggaca 120
ctgcagcttt tgtgccttct ccctgctgcc aacaccccca cacacactgc tgcagccact 180
ctaaagccct ttgtctttca ttgcttagtc accccctttg tcctcatctc aaatagggga 240
gtggaaaggg gcagtagagt tctctgggta tagctcctct tgcccctgcc ctttctggtc 300
tcccaccctt tgtccgactc ctctagtccc agccccgttg gcttagaacc agggtcaggc 360
aagtgggtgg tcaagagggtg ggtctggcag tcacaagggg gtgggtgatc caggaagtga 420
taggcaccag ggcagggtatt accgacctga gcaggaagg agggggaaaag gaagtattct 480
gacggatatg atatgcgggg gacaggaggt gacaaagcag agtgaatagg ggaatagagg 540
caagaggagg tgggtccactt ctgggaaagg aaagagactg ctgactgcac tctccttctc 600
ggggatttcc tggggaaaca agcagccaga ggaatggggtg agcagaaatt gccctactt 660
ctgaaccctt ccttgccctg agagttcata cccaagacct ctttccgag ttccctccta 720
tccaaagcca aaggaataat ttgcttcctt tccctaacac cacctcttcc tcccagcca 780
ctttcccccac cccaggcaat ggatttctcc cagtacccta atttccctat atgcacaatg 840
ctgtctccac cctctccctg ccccaggagg aattaaaaag aaaagatgac tagatattcc 900
aggaaccact gggttctcag agcaagggtg ggtggatggt gggagccagg tggggattct 960
cccagattga tactgggtga atctgggttc ctgagagcaa gtcttgccca tgctgggggc 1020
tggctgactt gaggtctggg gaggttttag ggcagttagg agtgggtagg agcagggcca 1080
aaagcctggg ggaagctact gggagctggg ccagggaaat ggggagtcag gaagtgggga 1140
gggggaaccc tggggggaaa tggaggcgga atggctgttc tgggctttgg agggggtggg 1200
tagtggtaac tcaggaaggg ggatcctgag ggagagaagg gacgttagaa aagaggaggt 1260
gccaccctgg atccgccttc tataaaagga aaagtgcgta accctcctg ccttgctcat 1320
tgccgcctct gttatgttca ttccaagcag gatcatccta cctttgggca gtcaactccc 1380
tgatcactgt ctccttgccct cccccaatgt tctgcctttt ttactcttcc cagctgctca 1440
gttctatctt gagccatgtc aagctacctc ttttatttgt tcttccctct tgatgcctcc 1500
ttactgttcc cctacctctt tttctcaggc agctcactca gtcccctcag ccctggaaac 1560
cagccactag ggccaaaggg cagcatgagg gagccttgag aaaagagaag ccatggtagg 1620
ttagactata agagcaggaa ttctcccagg accgtgatcc tatctgtgca tgccggccag 1680
gccctttccc tctactctctg cctctcctgg ggctctgtcc caccaaaaag ggaaagagac 1740
agctgagggc tgattgtggg gtttgggaaa aggctatgtc atcagctggc ccagtgccta 1800
ttatccattc ggctgctaga gattcccctc ccctgggcaa gtcccatttt tttgggaagc 1860
gatgatacac ccatctgagt cccaccgaca gagctcagct gagtggctta gagatcagcc 1920
aatcaatcgc agaggctcac catgcttaaa agagctggcg cggagagagg ctggggagaa 1980
cccacaggga gacccacaga cacatatgca cgagagagac agaggaggaa agagacagag 2040
acaaaggcac agcggaaagaa ggcagagaca aggcaggcac agaagcggcc cagacagagt 2100
cctacagagg gagaggccag agaagctgca gaagacacag gcagggagag acaaagatcc 2160
aggaaaggag ggctcaggag gagagtttgg agaagccaga cccctgggca cctctcccaa 2220
gcccaggac taagttttct ccatttccct taacggctct cagcccttct gaaaactttg 2280
cctctgacct tggcaggagt ccaagccccc aggctacaga gaggagcttt ccaaagctag 2340
gggtgtggag acttggtgcc ctagacggcc ttagtccctc ccagctgcag taccagtgcc 2400
atg

```

<210> 2

<211> 2003

<212> DNA

<213> Homo sapiens

<400> 2

| | | | | | | |
|-------------|------------|-------------|-------------|-------------|-------------|------|
| gtgggtgatc | caggaagtga | taggcaccag | ggcaggtatt | accgacctga | gcaggaaggg | 60 |
| agggggaaag | gaagtattct | gacggatatg | atatgcgggg | gacaggaggt | gacaaagcag | 120 |
| agtgaatagg | ggaatagagg | caagaggagg | tggtccactt | ctgggaaagg | aaagagactg | 180 |
| ctgactgcac | tctccttctt | ggggatttcc | tggggaaaca | agcagccaga | ggatgggggtg | 240 |
| agcagaaatt | gcccctactt | ctgaaccctt | ccttgccttg | agagttcata | cccaagacct | 300 |
| cttttccgag | ttcccctcta | tccaaagcca | aaggaataat | ttgtttcctt | tccctaacac | 360 |
| cacctcttcc | ctcccagcca | ctttcccccac | cccaggcaat | ggattttctcc | cagtacccta | 420 |
| atttccctat | atgcacaatg | ctgtctccac | cctctccctg | ccccagggag | aattaaaaag | 480 |
| aaaagatgac | tagatattcc | aggaaccact | gggttctcag | agcaaggtgg | ggtggatggt | 540 |
| gggagccagg | tggggattct | cccagattga | tactgggtga | atctgggttc | ctgagagcaa | 600 |
| gtcttgccca | tgctgggggc | tggtgactt | gaggctgggg | gaggggttag | ggcagttggg | 660 |
| agtgggtagg | agcagggcca | aaagcctggg | ggaagctact | gggagctggg | ccagggaaat | 720 |
| ggggagttag | gaagtgggga | gggggaaccc | tggggggaaa | tgagggcgga | atggctgttc | 780 |
| tgggcttttg | agggggtggg | tagtggtaac | tcaggaaggg | ggatcctgag | ggagagaagg | 840 |
| gacgttagaa | aagaggaggt | gccaccctgg | atccgccttc | tataaaagga | aaagtcgtta | 900 |
| accctcctg | ccttgtcatc | tgccgcctct | gttatgttca | ttccaagcag | gatcatccta | 960 |
| cctttgggca | gtcaactccc | tgatcactgt | ctccttgctt | cccccaatgt | tctgcctttt | 1020 |
| ttactcttcc | cagctgctca | gttctatcct | gagccatgtc | aagctacctc | ttttatttgt | 1080 |
| tcttccctct | tgatgcctcc | ttacctgttc | cctaccctct | tttctcaggc | agctcactca | 1140 |
| gtcccctcag | ccctggaac | cagccactag | ggccaaaggg | cagcatgagg | gagccttgag | 1200 |
| aaaagagaag | ccatggtagg | ttagactata | agagcaggaa | ttctcccagg | accgtgatcc | 1260 |
| tatctgtgca | tgccggccag | gccctttccc | tcactctctg | cctctcctgg | ggctctgtcc | 1320 |
| caccaaaaag | ggaaagagac | agctgagggc | tgattgtggg | gtttgggaaa | aggctatgtc | 1380 |
| atcagctggc | ccagtgccta | ttatccattc | ggctgctaga | gattccccct | ccctgggcaa | 1440 |
| gtcccatttt | tttgggaagc | gatgatacac | ccatctgagt | cccaccgaca | gagctcagct | 1500 |
| gagtggctta | gagatcagcc | aatcaatcgc | agaggctcac | catgcttaaa | agagctggcg | 1560 |
| cggagagagg | ctggggagaa | cccacaggga | gacccacaga | cacatatgca | cgagagagac | 1620 |
| agaggaggaa | agagacagag | acaaaggcac | agcgggaagaa | ggcagagaca | gggcaggcac | 1680 |
| agaagcggcc | cagacagagt | cctacagagg | gagaggccag | agaagctgca | gaagacacag | 1740 |
| gcaggggagag | acaaagatcc | aggaagaggag | ggctcaggag | gagagtttgg | agaagccaga | 1800 |
| cccctgggca | cctctcccaa | gccccaggac | taagttttct | ccatttcctt | taacggtcct | 1860 |
| cagcccttct | gaaaactttg | cctctgacct | tggcaggagt | ccaagcccc | aggctacaga | 1920 |
| gaggagcttt | ccaaagctag | ggtgtggagg | acttgggtgcc | ctagacggcc | tcagtccctc | 1980 |
| ccagctgcag | taccagtgcc | atg | | | | 2003 |

<210> 3

<211> 1603

<212> DNA

<213> Homo sapiens

<400> 3

| | | | | | | |
|-------------|------------|------------|------------|-------------|-------------|------|
| ggattttctcc | cagtacccta | atttccctat | atgcacaatg | ctgtctccac | cctctccctg | 60 |
| ccccaggggag | aattaaaaag | aaaagatgac | tagatattcc | aggaaccact | gggttctcag | 120 |
| agcaaggtgg | ggtggatggt | gggagccagg | tggggattct | cccagattga | tactgggtga | 180 |
| atctgggttc | ctgagagcaa | gtcttgccca | tgctgggggc | tggtgactt | gaggctgggg | 240 |
| gaggggttag | ggcagttggg | agtgggtagg | agcagggcca | aaagcctggg | ggaagctact | 300 |
| gggagctggg | ccagggaaat | ggggagtcag | gaagtgggga | gggggaaccc | tggggggaaa | 360 |
| tggaggcgga | atggctgttc | tgggctttgg | agggggtggg | tagtggtaac | tcaggaaggg | 420 |
| ggatcctgag | ggagagaagg | gacgttagaa | aagaggaggt | gccaccctgg | atccgccttc | 480 |
| tataaaagga | aaagtcgtta | acccctcctg | ccttgtcatc | tgccgcctct | gttatgttca | 540 |
| ttccaagcag | gatcatccta | cctttgggca | gtcaactccc | tgatcactgt | ctccttgctt | 600 |
| cccccaatgt | tctgcctttt | ttactcttcc | cagctgctca | gttctatcct | gagccatgtc | 660 |
| aagctacctc | ttttatttgt | tcttccctct | tgatgcctcc | ttacctgttc | cctaccctct | 720 |
| tttctcaggc | agctcactca | gtcccctcag | ccctggaac | cagccactag | ggccaaaggg | 780 |
| cagcatgagg | gagccttgag | aaaagagaag | ccatggtagg | ttagactata | agagcaggaa | 840 |
| ttctcccagg | accgtgatcc | tatctgtgca | tgccggccag | gccctttccc | tcactctctg | 900 |
| cctctcctgg | ggctctgtcc | caccaaaaag | ggaaagagac | agctgagggc | tgattgtggg | 960 |
| gtttgggaaa | aggctatgtc | atcagctggc | ccagtgccta | ttatccattc | ggctgctaga | 1020 |
| gattcccttc | ccctgggcaa | gtcccatttt | tttgggaagc | gatgatacac | ccatctgagt | 1080 |
| cccaccgaca | gagctcagct | gagtggctta | gagatcagcc | aatcaatcgc | agaggctcac | 1140 |
| catgcttaaa | agagctggcg | cggagagagg | ctggggagaa | cccacaggga | gacccacaga | 1200 |
| cacatatgca | cgagagagac | agaggaggaa | agagacagag | acaaaggcac | agcgggaagaa | 1260 |
| ggcagagaca | gggcaggcac | agaagcggcc | cagacagagt | cctacagagg | gagaggccag | 1320 |
| agaagctgca | gaagacacag | gcagggagag | acaaagatcc | aggaagaggag | ggctcaggag | 1380 |
| gagagtttgg | agaagccaga | cccctgggca | cctctcccaa | gccccaggac | taagttttct | 1440 |
| ccatttcctt | taacggtcct | cagcccttct | gaaaactttg | cctctgacct | tggcaggagt | 1500 |

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| ccaagccccc | aggctacaga | gaggagcttt | ccaaagctag | ggtgtggagg | acttggtgcc | 1560 |
| ctagacggcc | tcagtcacct | ccagctgcag | taccagtgcc | atg | | 1603 |

<210> 4
 <211> 1203
 <212> DNA
 <213> Homo sapiens

<400> 4

| | | | | | | |
|------------|-------------|-------------|------------|------------|-------------|------|
| tagtggtaac | tcaggaagg | ggatcctgag | ggagagaagg | gacgttagaa | aagaggaggt | 60 |
| gccaccctgg | atccgccttc | tataaaagga | aaagtcgtta | acccctcctg | ccttgatcatc | 120 |
| tgccgcctct | gttatgttca | ttccaagcag | gatcatccta | cctttgggca | gtcaactccc | 180 |
| tgatcactgt | ctccttgcc | cccccaatgt | tctgcctttt | ttactcttcc | cagctgctca | 240 |
| gttctatcct | gagccatgtc | aagctacctc | ttttatttgt | tcttccctct | tgatgcctcc | 300 |
| ttacctgttc | cctaccctct | tttctcaggc | agctcactca | gtccctcag | ccctggaaac | 360 |
| cagccactag | ggccaaagg | cagcatgagg | gagccttgag | aaaagagaag | ccatggtagg | 420 |
| ttagactata | agagcaggaa | ttctcccagg | accgtgatcc | tatctgtgca | tgccggccag | 480 |
| gccctttccc | tactctctg | cctctcctgg | ggctctgtcc | cacaaaaaag | ggaaagagac | 540 |
| agctgagggc | tgattgtggg | gtttgggaaa | aggctatgtc | atcagctggc | ccagtgccta | 600 |
| ttatccattc | ggctgctaga | gattccccctc | ccctgggcaa | gtcccatttt | tttgggaagc | 660 |
| gatgatacac | ccatctgagt | cccaccgaca | gagctcagct | gagtggctta | gagatcagcc | 720 |
| aatcaatcgc | agaggctcac | catgcttaaa | agagctggcg | cggagagagg | ctggggagaa | 780 |
| cccacaggga | gaccacagaa | cacatatgca | cgagagagac | agaggaggaa | agagacagag | 840 |
| acaaaggcac | agcggaaagaa | ggcagagaca | gggcaggcac | agaagcggcc | cagacagagt | 900 |
| cctacagagg | gagaggccag | agaagctgca | gaagacacag | gcaggagag | acaaagatcc | 960 |
| aggaaaggag | ggctcaggag | gagagtgttg | agaagccaga | cccctgggca | cctctcccaa | 1020 |
| gccaaggac | taagtgttct | ccatttcctt | taacggtcct | cagcccttct | gaaaactttg | 1080 |
| cctctgacct | tggcaggagt | ccaagcccc | aggctacaga | gaggagcttt | ccaaagctag | 1140 |
| ggtgtggagg | acttggtgcc | ctagacggcc | tcagtccttc | ccagctgcag | taccagtgcc | 1200 |
| atg | | | | | | 1203 |

<210> 5
 <211> 803
 <212> DNA
 <213> Homo sapiens

<400> 5

| | | | | | | |
|------------|------------|------------|-------------|-------------|------------|-----|
| aaaagagaag | ccatggtagg | ttagactata | agagcaggaa | ttctcccagg | accgtgatcc | 60 |
| tatctgtgca | tgccggccag | gccctttccc | tcactctctg | cctctcctgg | ggctctgtcc | 120 |
| cacaaaaaag | ggaaagagac | agctgagggc | tgattgtggg | gtttgggaaa | aggctatgtc | 180 |
| atcagctggc | ccagtgccta | ttatccattc | ggctgctaga | gattccccctc | ccctgggcaa | 240 |
| gtcccatttt | tttgggaagc | gatgatacac | ccatctgagt | cccaccgaca | gagctcagct | 300 |
| gagtggctta | gagatcagcc | aatcaatcgc | agaggctcac | catgcttaaa | agagctggcg | 360 |
| cggagagagg | ctggggagaa | cccacaggga | gaccacagaa | cacatatgca | cgagagagac | 420 |
| agaggaggaa | agagacagag | acaaaggcac | agcggaaagaa | ggcagagaca | gggcaggcac | 480 |
| agaagcggcc | cagacagagt | cctacagagg | gagaggccag | agaagctgca | gaagacacag | 540 |
| gcaggagag | acaaagatcc | aggaaaggag | ggctcaggag | gagagtgttg | agaagccaga | 600 |
| cccctgggca | cctctcccaa | gccaaggac | taagtgttct | ccatttcctt | taacggtcct | 660 |
| cagcccttct | gaaaactttg | cctctgacct | tggcaggagt | ccaagcccc | aggctacaga | 720 |
| gaggagcttt | ccaaagctag | ggtgtggagg | acttggtgcc | ctagacggcc | tcagtccttc | 780 |
| ccagctgcag | taccagtgcc | atg | | | | 803 |

<210> 6
 <211> 403
 <212> DNA
 <213> Homo sapiens

<400> 6

| | | | | | | |
|------------|------------|------------|------------|------------|-------------|-----|
| cacatatgca | cgagagagac | agaggaggaa | agagacagag | acaaaggcac | agcggaaagaa | 60 |
| ggcagagaca | gggcaggcac | agaagcggcc | cagacagagt | cctacagagg | gagaggccag | 120 |
| agaagctgca | gaagacacag | gcaggagag | acaaagatcc | aggaaaggag | ggctcaggag | 180 |
| gagagtgttg | agaagccaga | cccctgggca | cctctcccaa | gccaaggac | taagtgttct | 240 |
| ccatttcctt | taacggtcct | cagcccttct | gaaaactttg | cctctgacct | tggcaggagt | 300 |
| ccaagcccc | aggctacaga | gaggagcttt | ccaaagctag | ggtgtggagg | acttggtgcc | 360 |
| ctagacggcc | tcagtccttc | ccagctgcag | taccagtgcc | atg | | 403 |

<210> 7
 <211> 21
 <212> DNA

| | |
|---|----|
| <213> Homo sapiens | |
| <400> 7 tttccctggc aaggactatg a | 21 |
| <210> 8 <211> 17 <212> DNA <213> Homo sapiens | |
| <400> 8 aatggcgtga gtcgggc | 17 |
| <210> 9 <211> 26 <212> DNA <213> Homo sapiens | |
| <400> 9 tgatctcttt tggaattaag gagcat | 26 |
| <210> 10 <211> 23 <212> DNA <213> Homo sapiens | |
| <400> 10 atgggcatct cctccataat ttg | 23 |
| <210> 11 <211> 19 <212> DNA <213> Homo sapiens | |
| <400> 11 gcaaaccctt aaggcagcc | 19 |
| <210> 12 <211> 19 <212> DNA <213> Homo sapiens | |
| <400> 12 tgctgtttgc ctcggacat | 19 |
| <210> 13 <211> 33 <212> DNA <213> Homo sapiens | |
| <400> 13 gcgcgctcga gctgcattta ttgccttga tcc | 33 |
| <210> 14 <211> 33 <212> DNA <213> Homo sapiens | |
| <400> 14 gcgcgaagct tggcactggc actgcagctg gga | 33 |
| <210> 15 <211> 33 <212> DNA <213> Homo sapiens | |
| <400> 15 gcgcgctcga ggtgggtgat ccaggaagtg ata | 33 |

<210> 16
<211> 36
<212> DNA
<213> Homo sapiens

<400> 16
gcgcgctcga ggatttctcc cagtacccta atttcc 36

<210> 17
<211> 33
<212> DNA
<213> Homo sapiens

<400> 17
gcgcgctcga gtagtggtaa ctcaggaagg ggg 33

<210> 18
<211> 33
<212> DNA
<213> Homo sapiens

<400> 18
gcgcgctcga gaaaagagaa gccatggtag gtt 33

<210> 19
<211> 33
<212> DNA
<213> Homo sapiens

<400> 19
gcgcgctcga gcacatatgc acgagagaga cag 33

<210> 20
<211> 22
<212> DNA
<213> Homo sapiens

<400> 20
ccttcctggg gatttcctgg gg 22

<210> 21
<211> 22
<212> DNA
<213> Homo sapiens

<400> 21
ccccaggaaa tccccaggaa gg 22

<210> 22
<211> 22
<212> DNA
<213> Homo sapiens

<400> 22
ccttcctgga gatttcctgg gg 22

<210> 23
<211> 22
<212> DNA
<213> Homo sapiens

<400> 23
ccccaggaaa tctccaggaa gg 22

<210> 24
<211> 20
<212> DNA
<213> Homo sapiens

| | |
|---|----|
| <400> 24 cattgcttag tcaccccctt | 20 |
| <210> 25 <211> 20 <212> DNA <213> Homo sapiens | |
| <400> 25 aagggggtga ctaagcaatg | 20 |
| <210> 26 <211> 20 <212> DNA <213> Homo sapiens | |
| <400> 26 cattgcttgg gcaccccctt | 20 |
| <210> 27 <211> 20 <212> DNA <213> Homo sapiens | |
| <400> 27 aagggggtgc ccaagcaatg | 20 |
| <210> 28 <211> 27 <212> DNA <213> Homo sapiens | |
| <400> 28 ggtccacttc tgggaaagga aagagac | 27 |
| <210> 29 <211> 27 <212> DNA <213> Homo sapiens | |
| <400> 29 gtctctttcc tttcccagaa gtggacc | 27 |
| <210> 30 <211> 27 <212> DNA <213> Homo sapiens | |
| <400> 30 ggtccacata tgggaaagga aagagac | 27 |
| <210> 31 <211> 27 <212> DNA <213> Homo sapiens | |
| <400> 31 gtctctttcc tttcccatat gtggacc | 27 |
| <210> 32 <211> 37 <212> DNA <213> Homo sapiens | |
| <400> 32 ctttgtcttt cattgcttgg gcaccccctt tgtcctc | 37 |
| <210> 33 <211> 37 | |

<212> DNA
<213> Homo sapiens

<400> 33
gaggacaaag ggggtgccca agcaatgaaa gacaaag 37

<210> 34
<211> 38
<212> DNA
<213> Homo sapiens

<400> 34
caagaggagg tgggtccacat atgggaaagg aaagagac 38

<210> 35
<211> 38
<212> DNA
<213> Homo sapiens

<400> 35
gtctctttcc tttcccatat gtggaccacc tcctcttg 38

<210> 36
<211> 32
<212> DNA
<213> Homo sapiens

<400> 36
cactctcctt cctggagatt tcctggggaa ac 32

<210> 37
<211> 32
<212> DNA
<213> Homo sapiens

<400> 37
gtttccccag gaaatctcca ggaaggagag tg 32